

A marked-up version of claims 11-22 as amended is appended hereto.

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 11-22 are amended above to address the Examiner's concerns under §112, second paragraph. Support for the revisions to claims 11 and 22 are found on page 1, lines 21-26, and page 2, line 26 to page 3, line 3. Claims 12-21 are amended to correct dependency as requested by the Examiner. No new matter is introduced and entry is requested.

In the April 23, 2002 Office Action, claims 11-22 are rejected under 35 U.S.C.S §112, second paragraph, as allegedly indefinite. First, the Examiner has objected to claims 12-21 as improperly dependent on canceled claims 1, 4 or 5, and we have attended to this above by correcting the dependency of the claims as suggested by the Examiner. Second, the Examiner is objecting to the language "surfaces surrounding plants" in claim 1 and the language "immediate environment" in claim 22. To address this, claims 11 and 22 are amended to recite:

Claim 11: "A disinfecting agent for combating and inactivating phytopathogenic organisms that are present on plants and on hard surfaces surrounding the plants . . ."

Claim 22: A method for combating phytopathogenic microorganisms present on a plant or [in its immediate environment] on hard surfaces surrounding the plant. . ."

As is apparent from our disclosure in the specification, the surfaces are hard surfaces that closely surround the plant, such as the surfaces of knives, tables, and positioning surfaces—not other plants, and not the soil in which the plant is planted or the aerial spaces surrounding the plant. As described in our specification at page 1, lines 17-24, disinfectants are generally common to clean such hard surfaces in the vicinity of plants (e.g., hard surfaces of instruments used in horticulture applications), but that these

disinfectants are so incompatible to plants that the residue has to be removed completely following disinfecting to avoid subsequent damage to the plants. In contrast to this, our disinfectants may be used to effectively disinfect such hard surfaces, and no subsequent removal of the residue is necessary because the disinfectants are not damaging to the plants—even upon direct contact.

Our claims are believed to meet the criteria of §112, second paragraph, and withdrawal of this rejection is requested.

The Examiner has repeated the rejection of claims 11-22 under 35 U.S.C. §103(a) as obvious over the alleged “admissions” in the specification at pages 1-2 regarding the prior art (DE OS 3227126 and 3229097), in view of Moberg (WO 96/11572). The Examiner has asserted that it would have been obvious to use a diol, such as one taught by Moberg, in the combination anionic surfactant/carboxylic acid composition of the alleged admissions in our specification, to come up with our disinfectant agent for combating and inactivating phytopathogenic organisms that are present on plants.

The Examiner acknowledged the assertions in our last Amendment regarding the usefulness of our disinfectants to disinfect hard surfaces around plants without damaging the plants themselves, and noted that claims 11-21 do not explicitly recite this. We have amended independent claims 11 and 22 to recite:

Claim 11: A disinfecting agent for combating and inactivating phytopathogenic organisms that are present on plants and on hard surfaces surrounding the plants, said agent comprising at least one anionic surfactant, at least one aliphatic carboxylic acid, at least one aromatic carboxylic acid, and mono-, di- and/or triglycerols, in aqueous or aqueous-alcoholic solution, wherein said agent, when contacted with phytopathogenic organisms present on plants or on hard surfaces, kills or inactivates the phytopathogenic organisms without damaging the plants and without leaving phytotoxic residues on the hard surfaces.

Claim 22:1 A method for combating phytopathogenic microorganisms present on a plant or on hard surfaces surrounding the plant, comprising the step of applying to the plant and/or to its immediate environment a composition containing 0.5 to 10 % by wt. of a disinfection agent concentrate in dilute aqueous solution, which disinfecting agent comprises at least one anionic surfactant, at least one aliphatic carboxylic acid, at least one aromatic carboxylic acid, and mono-, di- and/or triglycerols, in aqueous or aqueous-alcoholic solution, wherein said agent, when contacted with phytopathogenic organisms present on plants or on hard surfaces,

kills or inactivates the phytopathogenic organisms without damaging the plants and without leaving phytotoxic residues on the hard surfaces.

This positively recites the efficacious properties of the agents. Support for this is found on page 1, lines 21-26, and page 2, line 21 to page 3, line 3, and in the examples of bactericidal activity. We reiterate that our invention is something that is not taught by the prior art—a composition that has pronounced microbiocide effectiveness on plants and hard surfaces surrounding the plants, but which does not damage plants cells (including roots, stalks, leaves, blooms and fruits) even during a concentrated application of our composition, and does not leave phytotoxic residues on the hard surfaces. This alone, we believe, is sufficient to distinguish our claims from anything taught by the cited references.

We pointed out in our last Amendment that, while certain combinations of anionic tensides, aliphatic and aromatic carbonic acids as well as a few special heteroaromatic acids as described in the German references DE OS 3227126 and DE 3229097 may destroy or inactivate animals, bacteria and fungus, these disinfectants are designed for use in households and in the food sector. Moberg's mixtures are carbonic acids having up to 10 carbon atoms, or the corresponding salts, as well as terylenes that are useful as cleaning agents, disinfectants, surface treatments, impregnation preparations or for anti-microbial treatment. Such agents are taught to be useful on human skin or surfaces such as wood. We also noted that none of these references describe a disinfecting agent for combating and inactivating phytopathogenic organisms that are present on plants or in a plant's surroundings, as required by independent claims 11 and 22 and all the dependent claims. As we stated :

Someone having ordinary skill in this art at the time of our invention would not have reasonably concluded that certain components described by DE OS 3227126 and DE 3229097 could be combined with certain other components described by Moberg—all of which are said to be useful against **human or zoological** pathogens—to achieve a disinfecting composition having a high degree of effectiveness against **phytopathogenic** organisms. The cell structure and metabolisms of plants and animals are completely different, and the ability of an agent to combat a human/animal germ (without injuring the human/animal) is no prediction that it will work effectively for plant germs (without injuring the plant). A preparation that may be used effectively on the skin of a baby and which

produces no side effects, may cause severe damage and even destruction for a plant.

In response to this, the Examiner has argued, especially with regard to claim 22, that "two agents [of the prior art] known to be useful in a method of combating microorganisms would be reasonably expected to be useful in combating pathogenic microorganisms regardless of the host. The two agents, singly or in combination, would be expected to exhibit antipathogenic activities, regardless of its cause." (See page 5 of the Office Action.) However, this assumption is not true in this case. To demonstrate this, we submit along with this Amendment a Rule 132 Declaration which provides evidence in the form of an expert's report that disinfectants like those of the prior art are destructive to plants, even if the disinfectants are compatible with human skin. The Declaration is unsigned, but a signed copy will be provided to the Examiner as soon as possible. This data and report supports our statement in the previous Amendment that "in the course of deployment of these preparations on living plants during the testing for any side-effects on plants, the test plants showed severe damage in the form of burns. Thus, such compositions would not be expected to be useful to combat phytopathogens."

In conclusion, we respectfully submit that our claimed invention is clearly distinguished from anything taught or suggested by the cited references. Reconsideration of this rejection is therefore requested.

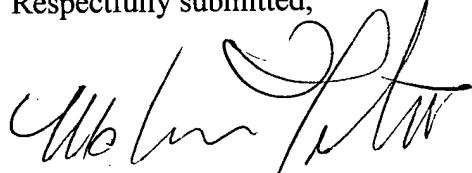
In summary, all of the Examiner's outstanding rejections and objections have been addressed, and the application is believed to be in allowable form. Notice to that effect is earnestly solicited. No amendment made was related to the statutory requirements of patentability unless expressly stated herein, and no amendment made was for the purpose of narrowing the scope of any claim unless we argued above that such amendment was made to distinguish over a particular reference or combination of references.

We note that with the April 23, 2002 Office Action the Examiner returned our PTO-1449 form, and initialed all of the cited references except two which were lined-through: DE 4233806A and DE 3434885A. Also, regarding DE 3229097A, the Examiner indicated that this reference was only considered based on applicants' alleged admissions regarding it in the text of our specification. We believe that all three of DE

4233806A, DE 3434885A and DE 3229097A, although not in English and without English translations, should have been considered by the Examiner because the relevancy and relevant passages of each reference were clearly indicated by the International Search Report for corresponding PCT International Application PCT/EP99/07151, which was also listed on our PTO-1449 form (and which was considered by the Examiner). As noted in our PTO-1449, this International Search Report lists these three German references. This is believed to be a proper submission of these three references. We request that the Examiner consider DE 4233806A, DE 3434885A and DE 3229097A, and indicate consideration by initialing and returning the attached copy of the PTO-1449 form.

If the Examiner has any questions or would like to make suggestions as to claim language, she is encouraged to contact Marlana K. Titus at (301) 924-9600.

Respectfully submitted,



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MARKED-UP VERSION OF THE AMENDED CLAIMS

11. (Twice amended) A disinfecting agent for combating and inactivating phytopathogenic organisms that are present on plants and on hard surfaces surrounding the plants, said agent comprising at least one anionic surfactant, at least one aliphatic carboxylic acid, at least one aromatic carboxylic acid, and mono-, di- and/or triglycols, in aqueous or aqueous-alcoholic solution, wherein said agent, when contacted with phytopathogenic organisms present on plants or on hard surfaces, kills or inactivates the phytopathogenic organisms without damaging the plants and without leaving phytotoxic residues on the hard surfaces.

12. (Amended) The disinfecting agent according to claim [1] 11, wherein the aliphatic and aromatic carboxylic acids are selected from the group consisting of methanoic acid, ethanoic acid, propanoic acid, hydroxyethanoic acid, 2-hydroxypropionic acid, oxoethanoic acid, 2-oxopropionic acid, 4-oxovaleric acid, benzoic acid, o-, m-, p-hydroxybenzoic acids, 3,4,5-tri-hydroxybenzoic acid, and mixtures thereof, and wherein the anionic surfactant has a primary chains of a length of C₈ – C₁₈ and is selected from the group consisting of alkyl sulfonates, alkylarylsulfonates, the sodium-, potassium- and ammonium salts of alkyl sulfonates and alkylarylsulfonates.

13. (Amended) The disinfecting agent according to claim [1] 11, wherein the mono-, di- and/or triglycols are selected from the group consisting of ethylene glycol, propylene glycol, 2,3-butylene glycol, diethylene glycol [2,2'-dihydroxydiethylether], triethylene glycol [(1,2-di-2-hydroxyethoxy-ethane], and mixtures thereof.

14. (Amended) The disinfecting agent according to claim [1] 11, which comprises a hydrotropic agent.

15. (Amended) The disinfecting agent according to claim [4] 14, wherein the hydrotropic agent is toluene sulfonate and/or cumene sulfonate as sodium- or potassium

salts and primary and/or secondary aliphatic, monovalent alcohols having a chain length of C₂ – C₈, individually or as a mixture.

16. (Amended) The disinfecting agent according to claim [5] 15, wherein the monovalent alcohols having a chain length of C₂ – C₈ is a monovalent alcohol.

17. (Amended) The disinfecting agent according to claim [1] 11, wherein the weight ratio of the aliphatic acids (A) to the aromatic acids (B) is between 1 : 9 and 9 : 1 and their sum is between 5 and 40 % by wt. relative to the total weight of the disinfecting-agent concentrate.

18. (Amended) The disinfecting agent according to claim [1] 11, wherein the weight ratio of the alkyl sulfonates and/or alkylarylsulfates and their salts (C) with the acids (A+B) in the ratio C : (B+A) is between 1 : 9 and 9 : 1 and their sum is between 10 and 60 % relative to the total weight of the disinfecting-agent concentrate.

19. (Amended) The disinfecting agent according to claim [1] 11, wherein the weight component of the glycols relative to the total weight of the disinfecting-agent concentrate is between 10 and 40 % by wt.

20. (Amended) The disinfecting agent according to claim [1] 11, wherein the weight ratio of the hydrotropic agents toluene sulfonate and cumene sulfonate, their sodium- or potassium salts, individually or in a mixture with each other, is between 5 and 40 % by wt. relative to the total weight of the disinfecting-agent concentrate.

21. (Amended) The disinfecting agent according to claim [1] 11, wherein the weight ratio of the monovalent alcohols, individually or in a mixture with each other, is between 5 and 60 % by wt. relative to the total weight of the disinfecting-agent concentrate.

22. (Amended) A method for combating phytopathogenic microorganisms present on a plant or [in its immediate environment] on hard surfaces surrounding the plant, comprising the step of applying to the plant and/or to its immediate environment a composition containing 0.5 to 10 % by wt. of a disinfection agent concentrate in dilute aqueous solution, which disinfecting agent comprises at least one anionic surfactant, at least one aliphatic carboxylic acid, at least one aromatic carboxylic acid, and mono-, di- and/or triglycols, in aqueous or aqueous-alcoholic solution, wherein said agent, when contacted with phytopathogenic organisms present on plants or on hard surfaces, kills or inactivates the phytopathogenic organisms without damaging the plants and without leaving phytotoxic residues on the hard surfaces.